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| 09/809,215 | 03/16/2001 | Toshiaki Suzuki | HIRA.0012 | 5704 |
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| REED SMITH LLP 3110 FAIRVIEW PARK DRIVE, SUITE 1400 FALLS CHURCH, VA 22042 | | | WILSON, ROBERT W | |
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DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/809,215

Applicant(s)

SUZUKI ET AL.

Examiner

Robert W Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/16/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1.0 The application of Suzuki et. al. entitled PACKET DATA TRANSFER METHOD AND PACKET DATA TRANSFER APPARATUS filed on 3/16/01 requesting foreign priority based upon JAPAN 2000-165007 dated 6/1/2000 was examined. Claims 1-19 are pending.

Claim Objections

2.0 Claims 1-8, 9, 14 and 16 are objected to because of the following informalities:

Referring to Claims 1, 9, & 14; the examiner objects applicant usage of “I/O” is indefinite because it cannot be ascertained whether the applicant means Input and output or means input or output. The examiner recommends the applicant change the claim to Input and Output.

Referring to Claims 5,6,9, & 10; the examiner objects applicant usage of “initiation/termination” is indefinite because it cannot be ascertained whether the applicant means initiation and termination or means initiation or termination. The examiner recommends the applicant change the claim to initiation or termination.

Referring to Claims 14, and 16, the applicant has misspelled flow as “row”. The examiner recommends that the applicant correct the spelling.

Referring to Claim 1, the examiner objects to “retaining identifier (hereinafter, referred to as “flow identifier data for identifying data to be processed and identifier (hereinafter, referred to as “control code”)” because the wording deviates from appropriate claim language. The examiner recommends: “flow identifier data for identifying data to be processed and control code identifier” instead.

Referring to Claim 7, the examiner objects to “a first predetermined amount (hereinafter referred to as “discard initiation point”. The examiner recommends “discard initiation point which discards a first predetermined amount”.

Referring to Claim 7, the examiner objects to “a second predetermined amount (hereinafter referred to as “discard termination point”) smaller than said first predetermined amount.

The examiner recommends “discard termination point which discards a second predetermined amount which is less than said first predetermined amount”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.0 The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 10 is rejected relative to 112/ 1st paragraph because it is a single means claim.

Referring to Claim 10, only a single means is called for consequently the breadth of the claim cannot be assessed per *In re Hyatt*.

Claim Rejections - 35 USC § 103

4.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (U.S. Patent No.: 6,721,273).

Referring to Claim 1, Lyon teaches: A packet data transfer method for an IP (Internet Protocol) network or an MPLS (Multi-Protocol Label Switching network (MPLS and IP are not referred to as limitations in the claims; therefore, they are interpreted as intended use. Packet transfer per Fig 1) comprising the steps of:

Retaining identifier (hereinafter referred to as "flow identifier") data for identifying data to be processed and identifier (hereinafter, referred to as control code") data for controlling the processing, in a packet transfer apparatus having a plurality of I/O ports (emission priority level or EPL or flow identifier per col. 7 line 19-col. 8 line 47 and col. 11 line 9- col. 13 line 18; CLP or control code per col. 7 line 19-col. 8 line 47 and col. 11 line 9- col. 13 line 18; and input/output ports per Fig 1

Receiving a packet data provided with said flow identifier data and said control code data (cells or packets are received with EPL or flow identifier and CLP or control code per Fig 1) and

Discarding packet data identified by the flow identifier data upon congestion in the packet data transfer apparatus, performing discard initiation or termination based on said control code (cells

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or packets are with EPL flow identifier are discarded based upon the value of CLP when a congestion is detected per col. 7 line 19-col. 8 line 47)

Lyon does not expressly call for: flow identifier but teaches EPL or control code but teaches CLP per col. 7 line 19-col. 8 line 47)

It would have been obvious to one of ordinary skill in the art at the time of the invention that the EPL and CLP performs the same function as the flow identifier and control code respectively.

In Addition Lyon teaches:

Regarding Claim 2, wherein the discard initiation and the discard termination of the packet data identified as the packet data to be processed are conducted at the packet data include predetermined control code data (It would have been obvious to one of ordinary skill in the art at the time of the invention that the CLP in the cell header is determined based upon a predetermined sequence of bits or code associated with discarding in order for the invention to work)

Regarding Claim 3, wherein the discard initiation and the discard termination of the packet data identified as packet data to be processed are conducted at packet data that follows packet data including predetermined control code (All of the cells or packets inherently have CLP in the header or control code)

Regarding Claim 4, wherein said flow identifier data indicated image data, said control code data is generated from any of a sequence initiation code, a GOP (Group of Pictures) initiation code, a picture (image frame) initiation code, and a slice initiation code included the image data (The examiner takes official notice that sending image or video data in ATM cells is well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention that the EPL or priority code in the ATM cell would vary base upon receipt of an image or video cell header)

Regarding Claim 5, a buffer data mount at the output stage of the packet data transfer apparatus is monitored as to whether or not it is greater than or equal to a predetermined amount (hereinafter, referred to as discard initiation/termination point")

If said buffer data amount decreases to fall below the discard initiation/termination point, and packet data including predetermined control code data and flow identifier data is received, then the discard of packet data including that flow identifier is terminated (If buffer containing packets decreases below a threshold then packet are discarded based upon CLP stops per col. 7 line 19-col. 8 line 47)

Regarding Claim 6, wherein a plurality of discard initiation/termination points are established in association with different flow identifier data each (The reference teaches a plurality of buffers each of which have different EPL or flow identifiers per col. 7 line 19-col. 8 line 47);

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said buffer data mount is monitored as to whether or not it is greater than or equal to the plurality of discard initiation/termination points established (col. 7 line 19-col. 8 line 47) ;

if said buffer data mount increase to reach or exceed any of the discard initiation/termination points, and packet data including predetermined control data and flow identifier data associated with that discard initiation/termination point is received, then the discard data including that flow identifier is initiated (When buffer exceeds threshold then buffer discarded based upon CLP per col. 7 line 19-col. 8 line 47); and

if said buffer data mount decreases to fall below any of the discard initiation/termination points, and packet data including predetermined control code data and the flow identifier data associated with that discard initiation/termination point is received, then the discard packet data including that flow identifier data is terminated (When buffer is below the threshold then discarding cease per col. 7 line 19-col. 8 line 47);.

Regarding Claim 7, wherein: a buffer data amount at the output stage of the packet data transfer apparatus is monitored as to whether or not it is greater than or equal to a first predetermined amount (hereinafter, referred to as “discard initiation point” (counts at output port per col. 2 line 50-55 and per col. 7 line 19-col. 8 line 47) ;

if said buffer data mount increase to reach or exceed any of the discard initiation/termination points, and packet data including predetermined control data and flow identifier data associated with that discard initiation/termination point is received, then the discard data including that flow identifier is initiated (When buffer exceeds threshold then buffer discarded based upon CLP per col. 7 line 19-col. 8 line 47); and

if said buffer data mount decreases to fall below any of the discard initiation/termination points, and packet data including predetermined control code data and the flow identifier data associated with that discard initiation/termination point is received, then the discard packet data including that flow identifier data is terminated (When buffer is below the threshold then discarding ceases per col. 7 line 19-col. 8 line 47);.

Regarding Claim 8, wherein a plurality of discard initiation/termination points are established in association with different flow identifier data each (The reference teaches a plurality of buffers each of which have different EPL or flow identifiers per col. 7 line 19-col. 8 line 47);

Said buffer data mount is monitored as to whether or not it is greater than or equal to the plurality of discard initiation points established, and whether or not it is greater than or equal to the plurality of discard termination points established (When buffer exceeds threshold or is greater than or equal then buffer discarded based upon CLP per col. 7 line 19-col. 8 line 47;

if said buffer data amount decreases to fall below the discard termination point, and packet data including predetermined control code data and flow identifier data is received, then the discard

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of packet data including that flow identifier data is terminated (When buffer is below the threshold then discarding ceases per col. 7 line 19-col. 8 line 47);.

Claim Rejections - 35 USC § 103

5.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon (U.S. Patent No.: 6,721,273) in view of Roy (U.S. Patent No.; 6,324,169)

Referring to Claim 9, Lyon teaches: A packet data transfer method for transferring packet data by using a router comprising a plurality of ingress cards each for establishing connection with an input line (Fig 1),

a plurality of egress cards each having a data discard function and buffer for establishing connection with an output line (Fig 1)

a switching connected to said plurality of ingress cards and said plurality of egress cards (Fig 1)

said packet data being a plurality of pieces of packet data into which layered coded image frame data is packetized by layer (The ATM cell inherently carries payload data) having a header including a field to be set with destination address (The ATM cell inherently has VPI/VCI or destination address); a field to be set with a flow identifier for each layer (ATM inherently has a PTI or flow identifier for each layer) and a field to be set with control code data for initiating/terminating discard (CLP or control code per col. 7 line 19-col. 8 line 47 and col. 11 line 9- col. 13 line 18; and input/output ports per Fig 1) wherein:

packet data input to said ingress card is transferred to said switch so that the packet data is transferred to egress cards corresponding to the value of its address field (data switched based upon VPI/VCI per Fig 1)

if the amount of packet data residing in any of said buffers exceeds a predetermined threshold value, the packet data to be input to that buffer is discarded by layer, based upon a control code data and depending on said flow identifier data (The applicant broadly claims "layer". The examiner has interpreted a group of cells with a given EPL and CLP or layer are discarded when

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a threshold has been exceeded per col. 7 line 19-col. 8 line 47. The examiner has interpreted the EPL or flow identifier and CLP or control code per col. 7 line 19-col. 8 line 47)

Lyon does not expressly call for: packet data being a plurality of pieces of packet data into which layered coded image frame data is packetized by layer but teaches ATM cell inherently carries payload data.

Roy teaches : packet data being a plurality of pieces of packet data into which layered coded image frame is packetized by layer (Multimedia including video carried in an ATM cell per col. 4 lines 20-41 or per Figs 2 &3

It would have been obvious to one of ordinary skill in the art at the time of the invention to add image or video packet of Roy to the ATM cells of Lyon in order to carry multimedia in ATM cells.

Referring to Claim 10, Lyon teaches: A packet data transfer apparatus comprising a plurality of ingress cards each for establishing connection with an input line (Fig 1),

a plurality of egress cards each having a data discard function and buffer for establishing connection with an output line (Fig 1)

and a switch connected to said plurality of ingress cards and said plurality of egress cards (Fig 1)

the packet data transfer apparatus transferring packet data input to said ingress cards to said switch so that the packet data is transferred to egress cards corresponding to the value of its address field (The ATM cell inherently has VPI/VCI or destination address which is utilized for switching per Fig 1)

said packet being being a plurality of pieces of packet data into which layered coded image frame data is packetized by layer (The ATM cell inherently carries payload data)

having a header including a field to be set with destination address (The ATM cell inherently has VPI/VCI or destination address); a field to be set with a control code for initiating/terminating discard (CLP or control code per col. 7 line 19-col. 8 line 47and col. 11 line 9- col. 13 line 18)

means for discarding, when the amount of packet data residing in any of said buffers exceeds a predetermined threshold value, the packet data to be input to that buffer by layer based on said control code data and depending on said flow identifier data (The applicant broadly claims "layer". The examiner has interpreted a group of cells with a given EPL and CLP or layer are discarded when a threshold has been exceeded per col. 7 line 19-col. 8 line 47. The examiner has interpreted the EPL or flow identifier and CLP or control code per col. 7 line 19-col. 8 line 47)

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Lyon does not expressly call for: packet data being a plurality of pieces of packet data into which layered coded image frame data is packetized by layer but teaches ATM cell inherently carries payload data.

Roy teaches: packet data being a plurality of pieces of packet data into which layered coded image frame is packetized by layer (Multimedia including video carried in an ATM cell per col. 4 lines 20-41 or per Figs 2 & 3

It would have been obvious to one of ordinary skill in the art at the time of the invention to add image or video packet of Roy to the ATM cells of Lyon in order to carry multimedia in ATM cells.

Claim Rejections - 35 USC § 103

7.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (U.S. Patent No.: 6,751,663) in view of Lemyre (U.S. Patent No.; 6,717,912)

Referring to Claim 11, Jorgensen data distribution scheme on an IP network (Fig 5a)

For distributing transmission data with flow identifier data for identifying said transmission data and control code data for controlling the discard initiation or termination of said transmission data in the middle of transmission arranged in a DS (Differentiated service) field in the IP packet header thereof (TOS or Class of service or Flow identifier per Fig 7 and per col. 18 line 8-67)

Farrell does not expressly call for: discarding but teaches differentiated service identification based upon TOS.

Lemyre teaches: discarding based upon class of service per col. 9 lines 1-25.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the discarding of Lemyre distinguishing of Farrell based upon TOS in order to prioritized data which is discarded in a congestion situation.

Claim Rejections - 35 USC § 103

8.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lyon et. al. (U.S. Patent No.; 5,892,924) in view of Lyon et. al. (U.S. Patent No.: 6,721,273)

Referring to Claim 12, Lyon teaches a data distribution scheme on a MPLS network (Fig 2), for distribution transmission data with flow identifier data for identifying said transmission data and control code data for controlling the discard initiation or termination of said transmission data in the middle of transmission arranged in a label field in the MPLS packet header thereof (Adding a label or flow identifier to ATM cell or UDP packet encapsulated in ATM cell per col. 8 lines 10-col. 10 line 18 or col. 15 line 13-col. col. 14 line 47.)

Lyon et. al. (U.S. Patent No.: 5,892,924) does not expressly call for: discarding based upon a control code but teaches an ATM cell.

Lyon et. al. (U.S. Patent No.: 6,721,273) teaches: discarding based upon a control code (CLP field in the ATM header per col. 7 line 19-col. 8 line 47 and col. 11 line 9- col. 13 line 18.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the CLP in the header of the ATM cell in order to determine which cell is to be discarded upon detection of a congestion in order to be standards compliant.

Referring to Claim 13, A packet data generating method for generating packet data from layered data consisting of a plurality of streams (Fig 2) wherein;

Flow identifier data for identifying each layered data to be transmitted and control code for initiating or terminating a discard operation when congestion occurs during transmission are added to each piece of said layered data partitioned by predetermined size to form layered packet data (Adding a label or flow identifier to ATM cell or UDP packet encapsulated in ATM cell per col. 8 lines 10-col. 10 line 18 or col. 15 line 13-col. col. 14 line 47. The ATM cell has an inherent PTI in the header which is utilized to identify payloads or pieces of said layered data partitioned by predetermined size to form layered packet data)

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UDP (User Datagram Protocol) headers are added thereto for UDP packetization (UDP packet encapsulated in ATM cell inherently has a UDP header per col. 8 lines 10-col. 10 line 18 or col. 15 line 13-col. col. 14 line 47

Lyon et. al. (U.S. Patent No.: 5,892,924) does not expressly call for: discarding based upon a control code but teaches an ATM cell.

Lyon et. al. (U.S. Patent No.: 6,721,273) teaches: discarding based upon a control code (CLP field in the ATM header per col. 7 line 19-col. 8 line 47 and col. 11 line 9- col. 13 line 18.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the CLP in the header of the ATM cell in order to determine which cell is to be discarded upon detection of a congestion in order to be standards compliant.

Claim Rejections - 35 USC § 103

9.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roy (U.S. Patent No.: 6,324,169 B1) in view of Slane (U.S. Patent No.; 6,279,140 b1)

Referring to claim 14, Roy teaches: a data shaping method (Figs 2 & 3) comprising the steps of:

Receiving a data flow which is distributed after creating a manner that flow identifier data for identifying each layered data consisting of a plurality of streams.

A sequence number to be consecutively given to data partitioned by predetermined size and a control data code for initiating or terminating a discard operation of each layered data are added to each layered data partitioned by said predetermined size to create layered packet data followed by UDP packetization and IP packetization (12-2, 11-2, & 10-2 per Fig 1 receives real time multimedia packet encapsulated RTP which is encapsulated UDP which is encapsulated in IP which is encapsulated ATM or layered data consisting of a plurality of streams. The examiner takes official notice TCP/IP protocol is well known in the art per Comer per Page 542-551. The examiner interprets the following which are inherently a part of RTP protocol which is part of TCP/IP as reading on following limitations of the claim: payload type or flow identifier, sequence number or sequence number, time stamp or control code for discarding, and zero

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padding packets in order to define a predetermined size Payload Type as a flow identifier, Sequence number as a sequence number. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the features of Comer to Roy in order to be standards compliant)

Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible (UDP packets per Figs 2 & 3)

Checking for continuity in the sequence numbers of said reconstructed layered packet data by each flow identifier data (RTP inherently checks for sequence numbers) When the sequence numbers are discontinuous, and if said control code data is control code for initiating the discard operation, discarding subsequently-received layered packet data up to the one immediately preceding the layered packet data including the next control code data)

When the sequence numbers are discontinuous, and if said control code data is control code data for initiating the discard operation, discarding subsequently-received layered packet data up to the one immediately determining the layered packet data including the next control code data, and if said control code data is control code data for terminating the discard operation, discarding subsequently- received layered packet data up to the one including the next control code data (RTP inherently assigns a Sequence number and time stamp which are utilized to determine which data is to be discarded);

Applying UDP and IP packetization to following layered packet data, and distributing the resultant to the same destination that is received (Figures 2 & 3)

Lyon does not expressly call for: Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible but teaches UDP packet per Figs 2-3

Slane teaches: Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible (col. 10 line 48-55)

It would have been obvious to one of ordinary skill in the art at the of the invention to add the checksum of Slane to the video UDP encapsulating system of Lyon in order minimize error when receiving UDP protocol.

Referring to Claim 15, It is within the level of one skilled in the art at the time of the invention to implement all the limitations of method claim 14 as an apparatus or means. Refer to the rejection in claim 14 for details.

Referring to claim 17, Roy teaches: a decoding scheme (Figs 2 & 3) comprising the steps of:

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Receiving a data flow which is distributed after creating a manner that flow identifier data for identifying each layered data consisting of a plurality of streams.

A sequence number to be consecutively given to data partitioned by predetermined size and a control data code for initiating or terminating a discard operation of each layered data are added to each layered data partitioned by said predetermined size to create layered packet data followed by UDP packetization and IP packetization (12-2, 11-2, & 10-2 per Fig 1 receives real time multimedia packet encapsulated RTP which is encapsulated UDP which is encapsulated in IP which is encapsulated ATM or layered data consisting of a plurality of streams. The examiner takes official notice TCP/IP protocol is well known in the art per Comer per Page 542-551. The examiner interprets the following which are inherently a part of RTP protocol which is part of TCP/IP as reading on following limitations of the claim: payload type or flow identifier, sequence number or sequence number, time stamp or control code for discarding, and zero padding packets in order to define a predetermined size Payload Type as a flow identifier, Sequence number as a sequence number. It would have been obvious to one of ordinary skill in the art at the time of the invention to add the features of Comer to Roy in order to be standards compliant)

Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible (UDP packets per Figs 2 & 3)

Discarding data if UDP data is UDP data is not reconstructible from the data (UDP packets per Figs 2 & 3)

Checking for continuity in the sequence numbers of said reconstructed layered packet data by each flow identifier data (RTP inherently checks for sequence numbers) When the sequence numbers are discontinuous, and if said control code data is control code for initiating the discard operation, discarding subsequently-received layered packet data up to the one immediately preceding the layered packet data including the next control code data)

When the sequence numbers are discontinuous, and if said control code data is control code data for initiating the discard operation, discarding subsequently-received layered packet data up to the one immediately determining the layered packet data including the next control code data, and if said control code data is control code data for terminating the discard operation, discarding subsequently-received layered packet data up to the one including the next control code data (RTP inherently assigns a Sequence number and time stamp which are utilized to determine which data is to be discarded);

Applying UDP and IP packetization to following layered packet data, and distributing the resultant to the same destination that is received (Figures 2 & 3)

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Lyon does not expressly call for: Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible or discarding data if UDP data is UDP data is not reconstructible from the data but teaches UDP packet per Figs 2-3

Slane teaches: Reconstructing UDP packet flow and said layered packet data from the IP packet data flow received and discarding data from which UDP data is not reconstructible (checksum per col. 10 line 48-55. If the UDP packet has a checksum error then it is not reconstructible) or discarding data if UDP data is UDP data is not reconstructible from the data (checksum per col. 10 line 48-55. If the checksum error is to great then the packet is discarded)

It would have been obvious to one of ordinary skill in the art at the of the invention to add the checksum of Slane to the video UDP encapsulating system of Lyon in order minimize error when receiving UDP protocol.

Referring to Claim 17, It is within the level of one skilled in the art at the time of the invention to implement all the limitations of method claim 15 as an apparatus or means. Refer to the rejection in claim 16 for details.

Claim Rejections - 35 USC § 103

11.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green (U.S.

Patent No.: 5,517,494)

Referring to claim 18, Green teaches: a packet data duplicating and distributing method (Figure 2) comprising the steps of:

Retaining flow identifier data for identifying data to be duplicated and control code data for controlling the duplication processing (Multicast address in the Multicast header per Figs 3A & 3B or flow identifier. The Multicast header or flow is utilized by tree nodes which packets should be duplicated and sent out to members of the group)

When packet data provided with said flow identifier data and control code data is received, the packet data identified is to be duplicated, performing duplication initiation and duplication

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termination on the packet data having said retained flow identifier data based on said control code data (The router in the tree deemed distribution router distributes multicast packet to members of their group based upon multicast header or flow identifier and multicast address or control code to nodes within the group per col. 2 line 19-col. 4 line 49.)

Green does not expressly call for: identified is to be duplicated, performing duplication initiation and duplication termination but teaches that the distribution router only multicasts enough packets for members of the group.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the distribution router only multicasting for members of the group performs the same function as identified is to be duplicated, performing duplication initiation and duplication termination

Referring to Claim 19, Green teaches a packet duplicating and distributing apparatus (It is within the level of one skilled in the art to implement the multicasting method per Figs 3A & 3B of Green as an apparatus)

Means for retaining flow identifier data for identifying data to be duplicated and control code data for controlling the duplication process (It is within the level of one skilled in the art to implement apparatus for maintaining or retaining the Multicast packet header or flow identifier per Figs 3A & 3B)

Means for receiving packet data provided with said flow identifier data and control code data (Node per Fig 2 has the ability to receive the multicast packet data)

Means for performing, when the packet data is to be duplicated, duplication initiation and duplication termination on the packet data having said retained flow identifier data based on said control code data (The router in the tree deemed distribution router distributes multicast packet to members of their group based upon multicast header or flow identifier and multicast address or control code to nodes within the group per col. 2 line 19-col. 4 line 49.)

Green does not expressly call for: identified is to be duplicated, performing duplication initiation and duplication termination but teaches that the distribution router only multicasts enough packets for members of the group.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the distribution router only multicasting for members of the group performs the same function as identified is to be duplicated, performing duplication initiation and duplication termination

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Conclusion

12.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on 571/272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2661

RWW
January 18, 2005



KENNETH VANDERPUYE
PRINCIPAL EXAMINER